The University of Memphis

Memphis, TN 38152-6590

Center for Earthquake Research and Information (CERI)
3890 Central Avenue
Campus Box 526590

901/678-2007
FAX 901/678-4734

October 27, 1997

General Secretary
Federal Communications Commission
Washington, D.C. 20554

Re: WT Docket No. 97-153

To Whom it may concern:

We submit these comments on the shared use of the 216-217 MHz band. We receive mailing on a monthly basis from Pike and Fischer, however, we received our mailing late this month and note that the comment period has already lapsed. Nonetheless, we ask that you enter these comments into the record on our behalf.

The Center for Earthquake Research and Information (CERI) at The University of Memphis has operated radio telemetered seismic stations for monitoring earthquake activity in the New Madrid and Southern Appalachian Seismic Zones for eighteen years. The New Madrid region monitored includes the Missouri Bootheel, NE Arkansas, NW Tennessee and extreme Western Kentucky as shown on the enclosed map. Radio telemetry is essential to the operation of these networks because sensitive seismic stations cannot be located in proximity to cultural noise sources that invariably accompany power and telephone lines, thus precluding their use for telemetry.

At present, we operate over 100 telemetry links in the New Madrid portion of the system in the 216-217 MHz and 218-219 MHz portions of the band. This allows for interference free operation with the IWCS primary band user, Watercomm. Neither of us has suffered any adverse interactions from our respective activities. Most of the data from the remote sites are concentrated at three digital recording nodes, however, a small subset of the data from each location is telemetered to CERI,which is located in Memphis, Tennessee.

The data are used by The National Earthquake Information Center (NEIC) a division of the US Geological Survey (USGS) to provide rapid notification to the Federal Emergency Management Agency (FEMA) and other state and federal agencies about location and magnitude of earthquakes. Interference with this portion of the system will strongly compromise this important function. One end of these telemetry links is in an urban environment (Memphis, TN) where they are the most likely to receive harmful interference from additional cochannel users. To date we have not observed any type of interference, however we are uncertain that anyone is using these type of facilities in this area, especially in light of the fact that television channel 13, serves this area as well.

In the Southern Appalachians we operate a broad scale seismic monitoring operation covering portions of East Tennessee, Western North Carolina, NW Georgia and SW Virginia. Many of these links traverse heavily populated areas. During the last 18 years we have suffered very little data loss due to interference from any other users. These data are not connected into any type of national notification system at this time. Local state emergency management groups have access to the data through a county EMA office in East Tennessee. Little of the East Tennessee operations would be affected because we try not to use any of the spectrum between 216-217 MHz.

The University of Memphis

Memphis, TN 38152-6590

Center for Earthquake Research and Information (CERI)
3890 Central Avenue
Campus Box 526590

901/678-2007
FAX 901/678-4734

The lack of interference in this band has allowed CERI to collect some of the highest quality seismic data at any location in the continental U.S.A.. Similar monitoring equipment utilized by the USGS in their licensed frequency band around 165 MHz is so frenquently interfered with that it is unsuitable for emergency notification.

We therefore ask the commission to consider these comments during the formulation of rules effecting the use of these frequencies. This band is one of the last truly interference free areas in the spectrum, and many other network operators are slowly migrating their telemetry facilities to this band as time and scarce research dollars permit.

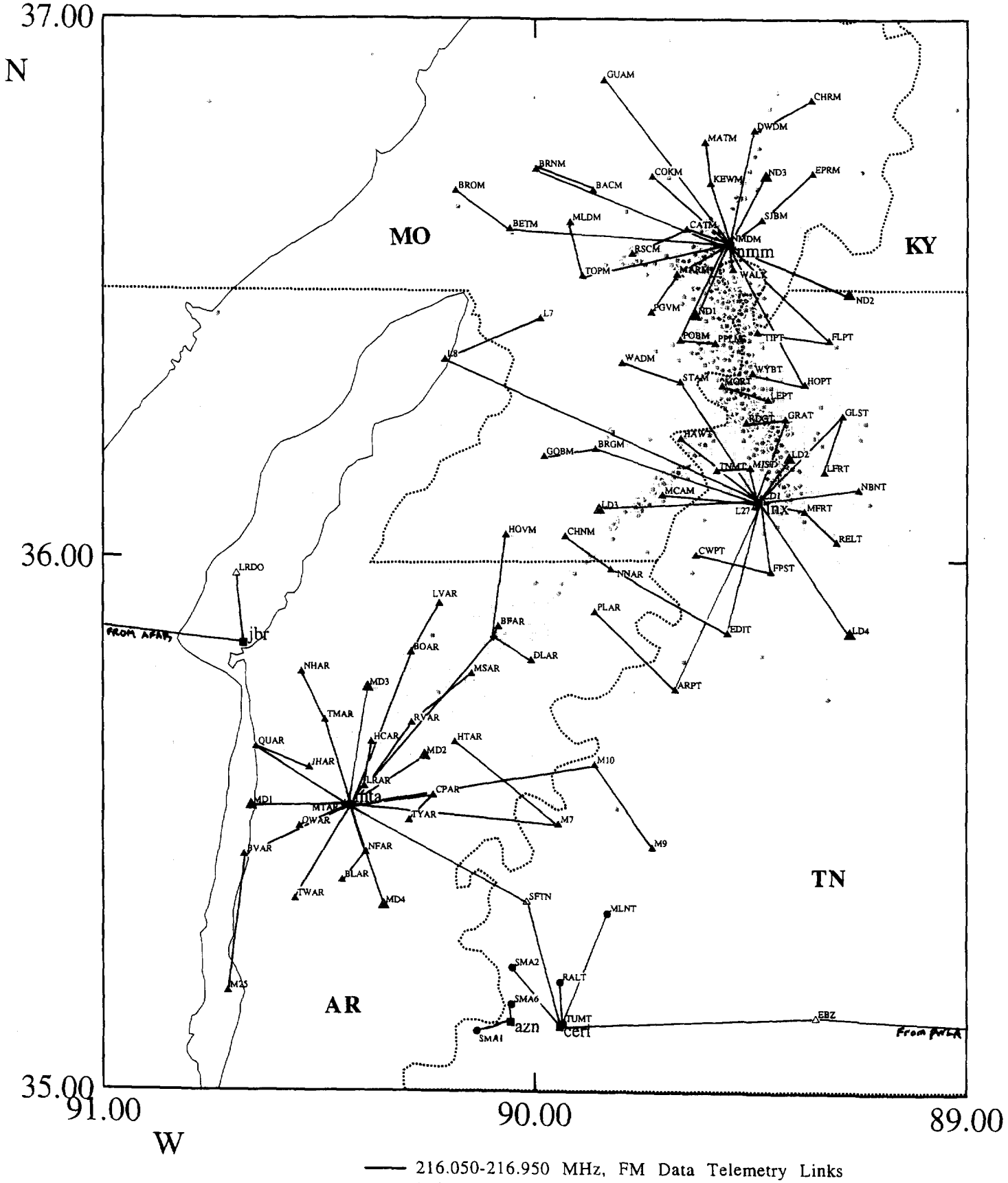
Sincerely,

Arch Johnston
Director of Research
CERI

AJ/bn

cc: Gene Thomson
C/O Federal Communication Commission
Wireless Telecommunications Bureau
2025 M Street NW
Washington, DC 205554

COOPERATIVE NEW MADRID SEISMIC NETWORK
STATIONS OPERATED BY CERI



216.050-216.950 MHz, FM Data Telemetry Links
218.050-218.950 MHz, FM Data Telemetry Links